

## REMARKS

In the present application, claims 1-17 are pending. Claims 1-17 are rejected by the Examiner under 35 U.S.C. §103. In response, applicants submit the following remarks and respectfully request reconsideration of the application.

### **Rejection Under 35 U.S.C. §103(a)**

In paragraph 3, claims 14-17 are rejected under 35 U.S.C. §103(a) as being unpatentable over Carpenter (U.S. Patent 6,199,068) in view of Cabrera (U.S. Patent 6,453,325).

Claim 14 recites the steps of creating metadata that can be used to ensure the integrity of the data and describe and track the state and location of the data and copying the data from the data system to a file system, designed to manage files, using protocols and the metadata that ensure the integrity of data during the copying. Carpenter discloses a canonical mapper that translates data in an input format into an output format. Cabrera discloses backup and restoration for a database system using a file manager.

Neither Carpenter, Cabrera, nor the combination of Carpenter and Cabrera teach or suggest all the claim limitations of claim 14. Regarding claim 14, the Office Action cites Cabrera in col. 26, lines 15-18 to teach creating and using metadata that can be used to ensure the integrity of the data. However, a closer reading further down in col. 27, lines 9-12 in Cabrera reveals that the metadata is used to check if file entries for restoration and reconciliation exist (Cabrera, col. 27, lines 9-12). Checking whether a file exists does not teach ensuring that the data within the file has integrity. This section of

Cabrera entitled “Restore for OFFBx and QSCPT” does not teach using metadata that ensures the integrity of the data during the copying as recited in claim 14.

The Office Action also cites col. 27, line 59 through column 28, line 5 in Cabrera to teach metadata that can be used to describe the state and location of the data. Specifically, the Office Action recites that “the location of the data” of claim 14 is read on reflecting that the file is “in the proper file group” (col. 28, line 1). An association that the file belongs to a file group does not reveal where the file is located.

Also, in col. 27, line 66 to col. 28, line 1, Cabrera teaches an action is required by the file manager “to ensure that its metadata reflects a file is linked and is in the proper file group.” In contrast, claim 14 uses the metadata to ensure the integrity of the data during copying as opposed to ensuring that the metadata reflects certain data (i.e. links and file groups) as taught in Cabrera.

The Office Action recites that one skilled in the art would have modified Carpenter to include creating metadata that can be used to ensure the integrity of the data and describe and track the state and location of the data. Also, the Office Action states that one skilled in the art would have modified Carpenter with Cabrera because creating metadata that can be used to ensure the integrity of the data and describe and track the state and location of the data would increase the stability and reliability of the file system. As discussed above, Cabrera does not teach or suggest using metadata to ensure the integrity of the data during copying, so therefore this reasoning cannot be used as a motivation to combine Carpenter and Cabrera. Therefore, claim 14 is allowable over Carpenter and Cabrera for at least the above reasons.

Claim 15 recites using metadata to determine when the data transfer is in progress, to determine when the data transfer has been successfully completed, and to indicate when rollback procedures can be initiated from a backup. Neither Carpenter nor Cabrera teach or suggest all the claim limitations of claim 15. Applicants fail to see in Cabrera the teaching of using metadata in the three specific uses of determining when the data transfer is in progress, determining when the data transfer has been successfully completed, and indicating when rollback procedures can be initiated from a backup. The cited portion of Cabrera in col. 13, lines 48-53 teaches how a metadata definition component recognizes a column definition. The other cited portion of Cabrera in col. 24, lines 20-30 teaches how metadata is used for deletion of information regarding unlinked files. Both cited portions fail to teach how metadata is used to determine the progress of data transfer. Also, both cited portions do not teach or suggest using metadata to determine the successful completion of data transfer and using metadata to indicate initiation of rollback procedures.

The Office Action also states that one skilled in the art would have modified Carpenter with the teaching of Cabrera because using metadata would provide definitions and guidelines as to the status of the data being transferred between systems. This motivation to modify is not found in either Carpenter or Cabrera. Also, there is nothing to suggest that the knowledge generally available to one skilled in the art would include using metadata would provide definitions and guidelines as to the status of the data being transferred between systems. Without any specific references in the prior art or knowledge of one skilled in the art, the motivation to modify is improper. Therefore, claim 15 is allowable for at least the above reasons.

Claims 16 and 17 are dependent on claim 15 and are allowable for at least the same reasons as claim 15.

In paragraph 4, claims 1-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carpenter (U.S. Patent 6,199,068) in view of Cabrera (U.S. Patent 6,453,325) and further in view of Kauffman (U.S. Patent 6,260,040).

Claim 1 recites interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system wherein the metadata indicates a status of the data.

The Office Action recites that Cabrera in col. 9, lines 11-18 teaches interpreting metadata and in col. 17, lines 38-39 teaches “to ensure data integrity is maintained during the copying of the data.” Cabrera in col. 9, lines 11-18 only teaches using meta-data definition component for relational tables, column definitions, and their data types in the DBMS catalog. Applicants fail to see how this use of metadata is used to ensure data integrity during copying. The other cited portion of Cabrera in col. 17, lines 38-39 teaches control processing according to referential integrity constraints. This cited portion of Cabrera does not teach any metadata. Both of these cited portions of Cabrera do not teach or suggest interpreting metadata to ensure data integrity is maintained during the copying of the data.

The Office Action cites that the motivation to modify Carpenter with Cabrera is interpreting metadata to ensure data integrity is maintained during the copying of data would increase the stability and reliability of the file system. However, as discussed above, Cabrera does not teach or suggest interpreting metadata to ensure data integrity is

maintained during the copying. Therefore, it cannot be used as a motivation to modify references.

Kauffman teaches a distributed client server system for managing and storing digital file. Kauffman also teaches metadata including a check-in status flag (abstract). Kauffman does not teach or suggest interpreting metadata to ensure data integrity is maintained during the copying of data from the data system to the file system wherein the metadata indicates a status of the data as recited in claim 1. Instead, Kauffman provides a system for users to indicate whether a file is checked-in or checked-out by another user. In one illustrative example using Kauffman, a user may check out a file, which prevents other users from accessing the file but does not ensure the integrity of the data. Therefore, after checking out a file, a user may still experience a bad write operation that is not reflected in the metadata. In this example, claim 1 advantageously interprets metadata to ensure data integrity is maintained during the copying to prevent a bad write operation.

The Office Action recites that Carpenter would have been modified with Kauffman to enable the system to update metadata with the status of the files and provide the metadata with the status of the files to the users of the shared file system (Kauffman col. 6, lines 25-28). However, this motivation to combine to provide the metadata with the status of the files to users does not relate to maintaining data integrity. Furthermore, all three references are directed to different solutions solving different problems, which reduce the likelihood of combining the three references. For example, Carpenter relates to translation between different file formats, while Cabrera relates to backup and restoration of a database system. Kauffman relates to a shared file system with a check-in/check-out procedure. One skilled in the art logically would not have combined translation, back-up,

and file check-in/check-out procedure merely to update metadata with the status of the file and provide the metadata to the users. Therefore, claim 1 is allowable for at least the above stated reasons.

Claims 2-13 are dependent on claim 1 and are allowable for at least the same reasons as claim 1.

### Conclusion

In view of the above remarks this application is in condition for allowance, and the Examiner is respectfully requested to allow this application. The Examiner is invited to call Applicants' representative at the number below if he has any questions or if there are remaining outstanding issues.

Respectfully submitted,

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